

REMARKS

By this response, claims 21-40 are pending as a continuing application under a Request for Continued Examination (RCE). All other claims are canceled. To the extent the prior art remains relevant, these remarks relate to the merits of the Final Office Action mailed January 13, 2005. Namely, the Examiner rejected all prior claims (1-20) as obvious in view of U.S. Patent Application 2001/0034733 to Prompt et al. and U.S. Patent 6,501,491 to Brown et al. However, pending claims 21-40 have many features and aspects not found in the original claims as well as avoiding various features and aspects previously recited in the original claims.

In general, Prompt et al. concerns itself with a hierarchical/relational translation system [104] that “extract[s] and transform[s] data from unrelated relational network data sources into an integrated format that may be universally addressed and viewed over network systems according to a hierarchical representation.” *Paragraph [0003]*. In one aspect, the translation system resides bi-directionally between a hierarchical computing system 102 and a relational computing system 106 to allow users to “navigate and discover” information in the relational computing system in a manner “substantially similar to navigating and discovering information in the hierarchical computing system 102.” *Paragraph [0128]*.

As is known, hierarchical systems provide information in “a top-down hierarchical model where information is navigable and ordered pursuant to predefined relationships being either one-to-one or one-to-many. The hierarchical network data models within system 102 are closely tied to their physical data storage since the data structures representing relationship are a part of the storage system.” *Paragraph [0126]*. In contrast, relational systems provide “unrelated heterogeneous sources of information, which can be based upon simple to more complex network data relational models that house the data but not necessarily the corresponding relationships amongst the data. Instead of relationships becoming inherently a part of the structure of system 106, logical relationships are represented by primary key matches that are connected as needed according to various

relational operations. To this extent, the structure of relational computing system 106 alone typically lacks a pre-established path of navigation, unlike hierarchical computing system 102.” *Paragraph [0127].*

In another aspect, the translation system resides intermediately between the hierarchical and relational computing systems and behaves as a “virtual” intermediary. Especially, the translation system operates with a “virtual directory server for capturing information in the nature of relational database schema and metadata. The captured schema and metadata are then translated into virtual directories that are universally compatible with standard communication protocols used with hierarchical computing systems.” *Abstract.*

The instant invention, however, has no aspects relating to “virtual directories.” It also does not serve as an intermediary between unrelated “computing systems,” such as hierarchical and relational. Rather, the pending claims 21-40 relate as methods and systems for searching various directories 10, such as across an internet 20 or LAN as seen in Figure 1. Further, the directories are searchable with a single query in administrator-created categories that link together or associate directory classes (having dissimilar objects and data) in two or more disparate directories. Often, the searching also occurs via a directory browser in a directory shell that further includes an administrator utility where category creating takes place.

Brown et al., on the other hand, teaches the “management of directory objects in a directory service.” *Col. 1, ll. 16-17.* In a preferred embodiment, the directory service includes first and second servers. The first contains “data records” of what is to be displayed. The second contains information on how to display the data records. *Abstract.* In turn, the two are combined together, “by sharing a common naming convention.” *Id.* As stated, the directory service 80 has the goal of providing “a single, consistent set of interfaces for managing and using multiple directories. A directory service differs from a directory in that it is both the directory information source and the services making the information available to the users.” *Col. 7, ll. 15-19.*

The instant invention, however, relates broadly to methods and systems for searching administrator-created categories with a single query amongst information found in two or more disparate directories. This is quite unlike Brown which teaches directory services 80 under the single generic corporate name/single directory “Myco.com” 96. Nowhere does Brown even hint or suggest an ability to perform single query searches of disparate directories.

As the specification of the present invention teaches, disparate or “different” directories, “potentially have different names for class attributes.” *Page 14, l. 27.* As an example, Cisco and Novell corporate directories are given as disparate directories, including differing directory classes 51, that are searchable with a single query under an administrator-created user-searchable category 62 having the name “Find All.” *Page 8, l. 13 - page 9, l. 4.* In turn, mapping or associating the differing directory classes 51 of the Cisco and Novell directories into a single user-searchable category 62 occurs, for example in a directory shell 60. In one embodiment, the directory shell 60 “includes two aspects: an administrator utility and a directory browser.” *Page 11, ll. 14-15.* Then, the administrator utility allows the administrator to disable or enable searching on a directory class by various mechanisms, such as checking a box (or not) under an Enabled Column of a table 122, for example. *E.g., page 12, l. 30 et seq.* User searching occurs, for example, via a query portion 210 of the directory browser shown as a page 200 in Figure 8. Results of the search are displayed in a variety of panels 220, 230 on the same page. Formats for both the utility and browser are preferably HTML.

Individually, each of the pending claims define over both Prompt and Brown, as well as the other art of record, for one or more of the reasons given hereafter.

Claim 21: This claim requires a directory shell able to reference two or more disparate directories. The shell includes both an administrator utility and directory browser. The utility is configurable to “associate” the directory classes of the two or more disparate directories into “a user-searchable category.” The browser is then where users search the directory classes of the two or more disparate directories with “a single query” of the user-

searchable category. Prompt and Brown, alone or in combination, do not render this obvious. They never even mention such aspects.

Claims 22-27: These claims depend from claim 21 and further require nuances of the system. Namely, they specify the whereabouts of the two or more disparate directories and the directory shell (claim 22); they describe structure that sends the single query and allows communication between the structure and the disparate directories (claims 23 and 24); they describe the category as including a category attribute mapped to class attributes of the directory class (claim 25); and they define where search results are displayed in the browser and where associating occurs in the utility (claims 26 and 27).

Claim 28: This claim describes methodology of “providing” the directory shell to “enable” the administrator utility to associate directory classes of two or more disparate directories in a single user-searchable category. Searching of the category then occurs from a directory browser of the shell. Searching is also done in a “direct” manner. This is quite unlike Prompt that requires “indirect” searching, at best, via a virtual intermediary of the translation system. Brown is entirely insufficient at searching disparate directories with its disclosed directory service.

Claims 29 and 30: These claims relate to specifying how the utility of claim 28 is enabled to associate directory classes and to displaying search results in a panel of the browser. Neither Prompt nor Brown intimate any such features, especially since these claims further include the features of claim 28.

Claim 31 relates to computer readable media having executable instructions for performing the methodology of claim 28.

Claim 32: This claim is similar to claim 21 and is patentable for the reasons given above. However, it further builds on 21 and requires a table, a query portion and a panel in the utility and browser for associating, searching and displaying search results. Prompt and Brown are, respectfully submitted, far short of rendering this obvious.

Claims 33-35: More narrowly, these claims build on claim 32 and particularly specify check boxes for associating, an enable column in the table and an HTML format for both the utility and browser.

Claim 36: This claim requires the creation of a single user-searchable category from directory classes of two or more disparate directories and an ability to “directly” search these classes with a “single query” of the category. Negatively, the claim further requires the absence of any creation or use of a virtual directory. Prompt, on the other hand, “indirectly” searches and does so expressly with a virtual directory. Brown, on the other hand, is incapable of searching two or more disparate directories in a single query. It is submitted that the prior art, alone or in combination, cannot now render this claim obvious. In fact, this claim embodies the antithesis of Prompt by avoiding virtual directories and performing direct searches.

Claims 37-39: These claims all relate to how a category of claim 36 is created. In one aspect, creating further includes associating directory classes in the utility (claim 37). In another, it relates to creating more than one category (claim 38). In still another, it requires providing a directory shell for loading on a computer in communication with servers having the disparate directories (claim 39).

Claim 40 relates to computer readable media having executable instructions for performing the methodology of claim 36.

Support for the claims is found throughout the specification. Particularly, disparate or different directories are recited as “Cisco” and “Novell,” for example. *Page 9, l. 1-4.* Administrator utilities and directory browsers are part of a directory shell. *E.g., page 11, ll. 14-15 and Figures 4-11.* User-searchable “categories” are given throughout. Tables in the administrator utility, including an enable column, are seen in Figure 4, element 122, for example, and its corresponding written description. Panels and a query portion in the directory browser include 220, 230 and 210 in Figure 8. The steps of associating and creating are given throughout, especially Figure 3. An overall computer system of the

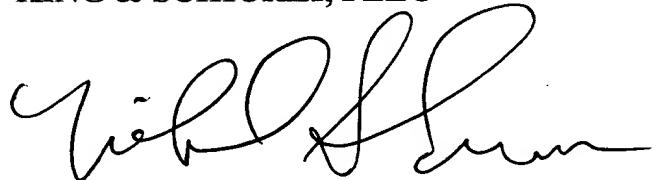
invention, including directory shell 40 and interface /drivers 46/42 etc. are seen clearly in Figure 1 and its attendant written description.

Consequently, the Applicant submits all claims are in a condition for allowance and requests a timely Notice of Allowance be issued for same. *To the extent any fees are due beyond those expressly authorized in the accompanying Request for Continued Examination, the undersigned authorizes the deduction from Deposit Account No. 11-0978.* None are believed due, however, because the Applicant has paid the RCE filing fee under 37 C.F.R. §1.17(e) and paid for twenty total claims including four independent ones.

Finally, the Applicant requests a change in the attorney document number of record. Namely, please replace NO078/100002 with 1363-007. The docket number changed when the new Power of Attorney (POA) went into effect. The Patent Office indicated acceptance of the changed POA in a paper mailed on March 14, 2005.

Respectfully submitted,

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